UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
JAROENCHONWANIT, BUNJOB

ART UNIT	PAPER NUMBER
2152	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/925,786	DAVIS ET AL.
	Examiner	**Art Unit**	
	Nabil M. El-Hady	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 December 2005*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-27* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>all submitted with RCE</u>

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex*

Parte Quayle, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible

for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has

been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 12/15/2005 has been entered.

2.   Claims 1-27 are pending in this application.

3.   The allowability of claims 1-27 of the last office action by the examiner is withdrawn due

to new prior art submitted by the applicant after allowance.

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a
> whole would have been obvious at the time the invention was made to a person having
> ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

5.   Claims 1-6 and 8-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cunningham et al. (US 6,124,806), hereafter "Cunningham" in view of Robert E. Kahn (The

Organization of Computer Resources into a Packet Radio Network, IEEE, 1977, hereinafter

"Robert".

6.   Cunningham is cited by the examiner in a previous office action, and Robert is cited by the applicant in IDS paper.

7.   As to claims 1 and 23, Cunningham discloses the invention including a site controller (DCM 112, Fig. 1) adapted to be used in an automated monitoring system configured for monitoring and controlling a plurality of remote devices (SIM 102, Fig. 1) via a host computer connected to a first communication network (CN 118, Fig. 1), the site controller configured for controlling communication with the host computer (HM 120, Fig. 1) and a plurality of communication devices that define a second communication network associated with the plurality of remote devices (108, Fig. 1; col. 4, lines 47-67), wherein the second communication network comprises a first communication device associated with a first remote device and a second communication device associated with a second remote device (Master Telemetry Network Repeater 6330; Telemetry Network Repeater 6328; Telemetry gateway 6326, Telemetry Interface Modules 6318, 6320, and 6324, Fig. 49), the site controller comprising: a transceiver configured to communicate with the plurality of communication devices via the second communication network (2008, Fig. 25; and inherent in col. 4, lines 56-60; and col. 6, lines 11-18; 45-49); a network interface device configured to communicate with the host computer via the first communication network (inherent in col. 4, lines 60-62; and col. 7, lines 19-24); logic configured to manage communication with each of the plurality of communication devices (col. 22, line 8 to col. 23, line 57; and Figs. 35 and 36), via a first communication protocol (col. 12, lines 52-59; and col. 33, line 45 to col. 34, line 49), based on one or more communication paths for each of the plurality of communication devices, and manage communication with the host computer via a second communication protocol (col. 45, line 54 to col. 46, line 5).

8.   Cunningham does not explicitly disclose each communication path comprising one or

more communication devices involved in the communication link between the transceiver and

each of the plurality of communication devices. Robert, on the other hand, discloses in a similar

art that each communication path comprising one or more communication devices involved in

the communication link between the transceiver and each of the plurality of communication

devices (Fig. 5; pages 173-174 under SYSTEM STRUCTURE). It would have been obvious to

one skilled in the art at the time of the invention to combine the teachings of Cunningham and

Robert because Robert's teachings would enhance Cunningham's system by providing an

effective to interconnect communication devices and achieve area coverage beyond line of sight

(see, Robert abstract), as well as satisfying the need for reliable backup of all the critical system

functions (see, Robert, page 171, left column, 2nd paragraph).

9.   As to claim 15, the claim is rejected for the same reasons as claims 1 and 23 above. In

addition, Cunningham discloses a method for controlling communication with a host computer

(Host Module HM 122, Fig 1) connected to a first communication network (Communication

network CN 118, Fig. 1) and a plurality of communication devices (Sensor Interface Module SIM

102, Fig. 1) that define a second communication network (hardwire or Wireless transmission

108, Fig. 1) associated with a plurality of remote devices (inherent) that are to be monitored and

controlled by the host computer (Host Module HM 122, Fig.1), the method comprising the steps

of determining a unique address for each of the plurality of communication devices by receiving

an initialization message (inherent in col. 13, lines 54-56; col. 14, lines 12-20; and col. 15, lines

4-12), determining with which of the plurality of communications devices that each of the

plurality of communication devices has a communication link (inherent in col. 6, lines 20-50) ;

based on the plurality of unique addresses and which of the plurality of communications devices each of the plurality of communication devices has a communication link with, determining one or more communication paths associated with each of the plurality of communication devices (inherent in col. 6, line 51 to col. 7, line 17; and col. 16, lines 20-35); managing communication with each of the plurality of communication devices (col. 22, line 8 to col. 23, line 57; and Figs. 35 and 36), via a first communication protocol (col. 12, lines 52-59; and col. 33, line 45 to col. 34, line 49), based on or more of the communication paths associated with each of the plurality of communication devices (col. 6, lines 20-31; and 108, Fig. 1); and managing communication with the host computer via a second communication protocol (col. 45, line 54 to col. 46, line 5). Robert discloses determining a first communication path associated with a first communication device of the plurality of communication devices, the first communication path comprising a second communication device of the plurality of communication devices in communication with the first communication device, wherein the first communication device is associated with a first remote device and the second communication device is associated with a second remote device (Fig. 5; pages 173-174 under SYSTEM STRUCTURE).

10.   As to claim 2, Cunningham discloses the logic as software and discloses a micro controller for implementing the logic (col. 22, lines 7-8).

11.   As to claims 3, 16, and 24, Cunningham discloses each of the plurality of communication devices are wireless communication devices (col. 6, lines 11-13), the plurality of wireless communication devices being disposed throughout a geographic area such that the antenna patterns associated with the plurality of wireless communication device overlap to create a

coverage area that defines the second communication network (col. 6, lines 11-19; col. 7, lines 32-44; and col. 14, lines 1-11).

12.   As to claims 4, 17, and 25, Cunningham discloses the first communication network as a wide area network (col. 32, lines 41-45; and col. 45, lines 60-67) and the second communication protocol comprises TCP/IP (col. 34, lines 58-65).

13.   As to claim 6, Cunningham discloses the network interface device is selected from the group consisting of a dial-up modem, an ISDN card, a DSL modem, and a LAN card (col.32, lines 41-45).

14.   As to claim 8, Cunningham discloses one or more look-up tables residing in a memory (col. 31, lines 6-17).

15.   As to claims 10, 11, and 21, Cunningham discloses the logic is configured to receive a first message generated by one of the plurality of communication devices via the second communication network , the first message comprising a first communication device identifier associated with the one of the plurality of communication devices associated with one of the plurality of remote devices that generated the first message (col. 13, lines 54-56) and a predetermined function code corresponding to a data signal provided by the one of the plurality of remote devices associated with the one of the plurality of wireless communication devices that generated the message (col. 14, lines 20-24), the logic is configured to determine, based on the first communication device identifier, the one of the wireless communication devices that generated the first data signal (col. 14, lines 18-20).

16.   As to claim 12, Cunningham discloses the logic is configured to translate the first

message into a second message configured for transmission to the host computer via the first

communication network (col. 32, lines 46-54).

17.   As to claim 20, Cunningham discloses receiving a request, via the first communication

network, from the host computer for information related to one of the plurality of remote devices,

providing a command message to the second communication network for delivery to the one of

the plurality of remote devices based on one of the communication paths associated with the

communication device corresponding to the one of the plurality of remote devices (col. 32, lines

15-24; col. 44, lines 14-35, 54-64; and col.45, lines 54-59).

18.   As to claim 22, Cunningham discloses providing the data signal to the first

communication network for delivery to the host computer (118, 120, and 122 of Fig. 1).

19.   As to claims 5, 9, 18, 19, and 26, Cunningham discloses the first communication

protocol comprises a data packet, the data packet comprising: a from address, and a command

number comprising a function code, a data field, a checksum field; and a packet number field

(col. 14, lines 13-54; and Fig. 21). Cunningham, however, does not discloses other fields in the

packet, such as a to address, a packet length field; a packet maximum field, and a message

number field. However, it would have been obvious to one skilled in the art at the time of the

invention to that an extended packet fields would increase the communication efficiency in

Cunningham's system by allowing for broadcast messages and avoiding network congestion, an

may be included as well in an associated communication protocol. Robert discloses that the

complete routing information for each packet is inserted with the packet as it moves the

network. (Page 175, left column, 3rd paragraph).

20. As to claims 13 and 14, the claims are rejected for the same reasons as claim 1 above.

However, Cunningham does not explicitly disclose a second communication identifier

associated with an intermediate communication device. Robert, on the other hand, discose that

a second communication identifier associated with an intermediate communication device

(obvious from page 174, where packet radio is equipped to retransmit by radio some or all

packets which it receives).

21. Claims 7 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cunningham in view of Robert as applied to claims 1-6 and 8-26 above, and further in view of

Jil A. Westcott (Issues in Distributed Routing for Mobile Packet Radio networks), IEEE, 1982,

hereinafter "Jil".

22. Jil is cited by the applicant in an IDS paper.

23. As to claim 7, and 27, Cunningham and Robert does not explicitly disclose receiving

initialization commands from the plurality of communication devices. Jil, on the other hand,

discloses receiving initialization commands from the plurality of communication devices (page

233, lines 1-6 under Design Overview). It would have been obvious to one skilled in the art at

the time of the invention to combine the teachings of Cunningham and Robert with the

teachings of Jil because Jil's receiving initialization commands from the plurality of

communication devices would assist in configuring look-up tables for message communication

between devices in Cunningham's system (see, Jil, page 233, lines 1-6 under Design

Overview).

24.   Applicant's arguments with respect to claims 1-27 have been considered but are moot in

view of the new ground(s) of rejection.

25.   All claims are drawn to the same invention claimed in the application prior to the entry of

the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and

art of record in the next Office action if they had been entered in the application prior to entry

under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first

action after the filing of a request for continued examination and the submission under 37 CFR

1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set

forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

will the statutory period for reply expire later than SIX MONTHS from the mailing date of this

final action.

26.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Nabil M. El-Hady whose telephone number is (571) 272-3963. The

examiner can normally be reached on 9:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 28, 2006

Nabil El-Hady, Ph.D, M.B.A.
Primary Examiner
Art Unit 2152